

## ENGINEERING STATEMENT

This Engineering Statement has been prepared by B. Benjamin Evans of Evans Associates, Consulting Communications Engineers in Thiensville, Wisconsin. Mr. Evans has been a consultant in broadcast engineering for 13 years, and has been involved in the planning and construction of numerous radio broadcast facilities across the United States. Mr. Evans is a member of the Association of Federal Communications Consulting Engineers, a professional association of communications engineers practicing before the Federal Communications Commission.

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This affiant has been retained by Milford Broadcasting Company, applicant for an FCC construction permit to build a new Class C2 FM station at Milford, Iowa, to evaluate a competing application by Sharon A. Mayer, to determine: 1) the minimum engineering and construction costs to build the FM facility proposed by Mayer; 2) to determine whether or not the proposed antenna-supporting tower, from an engineering feasibility standpoint, can be built on the property identified by Mayer as being available for such construction.

### ENGINEERING & CONSTRUCTION COSTS

The following costs have been obtained from a national vendor of broadcast equipment. The amounts shown are considered by this affiant to be the minimum amount that must be spent on new equipment and construction to build a transmitting facility such as that proposed by Mayer, and to equip a studio capable of carrying live programming and with the means for producing pre-recorded programming.

20 KW FM Transmitter & Accessories	\$ 47,315
6-bay Circularly-Polarized High-Power FM Transmitting Antenna	19,812
3" Transmission Line & Accessories	14,702
460' Steel, Guyed Tower (FAA-lighted, 70% guying)	62,000
10' X 20' Transmitter Building	25,000
Audio Processing Equipment	10,500
Air Studio Equipment	20,000
Production Equipment	23,000
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TOTAL	\$222,219

It should be noted that the above costs do not include the construction of a studio nor the means to bring the audio to the transmitter site (studio-transmitter link, leased telephone line, etc.). Also not included in the above are installation costs for the air studio and production equipment, and off-air monitoring equipment.

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Even if the vendor should give its best discount (20%), the total cost would still be more than \$177,000.

**LAND REQUIREMENTS FOR TOWER**

The parcel of land on which Mayer proposes to build a 468-foot tower, has dimensions of 495 feet north and south, and 561 feet east and west. A 100-foot square notch on the north side of this rectangular area is taken by a water tower, and is not part of the property. A road right-of-way along the east side of the property takes up a 33-foot-wide strip of land running north and south. Thus, the working dimensions of the property are 495 feet by 528 feet, which is exactly 6 acres.

Since the longer sides of the property run east and west, the maximum land-use efficiency would be obtained with one set of guy wires oriented 90° True, and the other two sets of guy wires oriented at 210° and 330° True. The standard guying ratio (the ratio of the distance between the tower and the outer guy anchors, to the height of the tower) is 70%. The minimum amount of land required for erecting a 468-foot tower at 70% guying is 497 feet by 574 feet, or 6.5 acres, which is a larger parcel of land than is available at Mayer's proposed site. In order for the tower and guy wires to fit inside the property boundaries, the tower would need to be guyed at 64%. As the guying ratio increases, the cost of the tower also increases.

Many municipalities require a minimum setback from the property boundaries for new constructions. A typical setback for commercial construction is 50 feet. If the outer guy anchors must be set back at least 50 feet from any boundary, the minimum guying ratio would have to be 52%.

Many communities and state governments also require that the tower itself be set back from a public road at least equal to the height of the tower. If such a requirement exists at the Mayer site, the tower would have to be placed 60 feet or less from the west boundary of the property. This would leave so little room on the west side of the property for the two guy wires and anchors at 210° and 330°, that even with no property line setback, the guying ratio would have to be 25% or less. A tower with such a small guying ratio would be prohibitively expensive. If a 50-foot setback were required, it would not be possible, in the opinion of this affiant, to construct a guyed 468-foot tower under these conditions.

**AFFIDAVIT**

COUNTY OF OZAUKEE

STATE OF WISCONSIN

} ss:

**B. BENJAMIN EVANS**, being duly sworn upon oath deposes and says:

That his qualifications are a matter of record with the Federal Communications Commission;

That he is a Consulting TeleCommunications Engineer in Wisconsin, and is a partner in the firm of Evans Associates;

That this firm has been retained by Milford Broadcasting Company to prepare this engineering exhibit;

That he has either prepared or directly supervised the preparation of all technical information contained in this engineering statement, and that the facts stated in this engineering statement are true of his knowledge, except as to such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.

  
B. Benjamin Evans

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Subscribed and sworn to before me this 1st day of March, 1993.

  
Notary Public My Commission expires Oct 1996

EXHIBIT 7

***du Treil, Lundin & Rackley, Inc.***

A Subsidiary of A. D. Ring, P.C.

September 10, 1991

By Facsimile

Ms. Sharon A. Mayer  
County Road A34  
RR#1, Box 169  
Milford, IA 51351

Dear Sharon:

Attached is a map which shows the site location zone for FM channel 271C2, Milford, Iowa. The useable area consists of a triangle located approximately 1 mile north of Milford. The site location zone is bordered to the south with station KAYL-FM, Storm Lake, Iowa, to the north with station KBEY-FM, St. Paul, Minnesota, and to the west with station KTWB, Souix Falls, South Dakota.

The transmitter site should be located within the described triangle and will require approximately 8 acres (600 feet x 600 feet) to accomodate a 300 foot tall guyed tower. Preferably, the site should be located on high ground. Once you have determined the location of a possible site it will be necessary for us to confirm its suitability.

Should you have any questions, please do not hesitate to contact me.

Very truly yours,

  
James D. Sadler

Enclosures

cc: Richard Swift, Esquire

JDS:las

DLR:2578



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Third Floor  
Washington, D.C. 20036  
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FAX: 202/466-2042

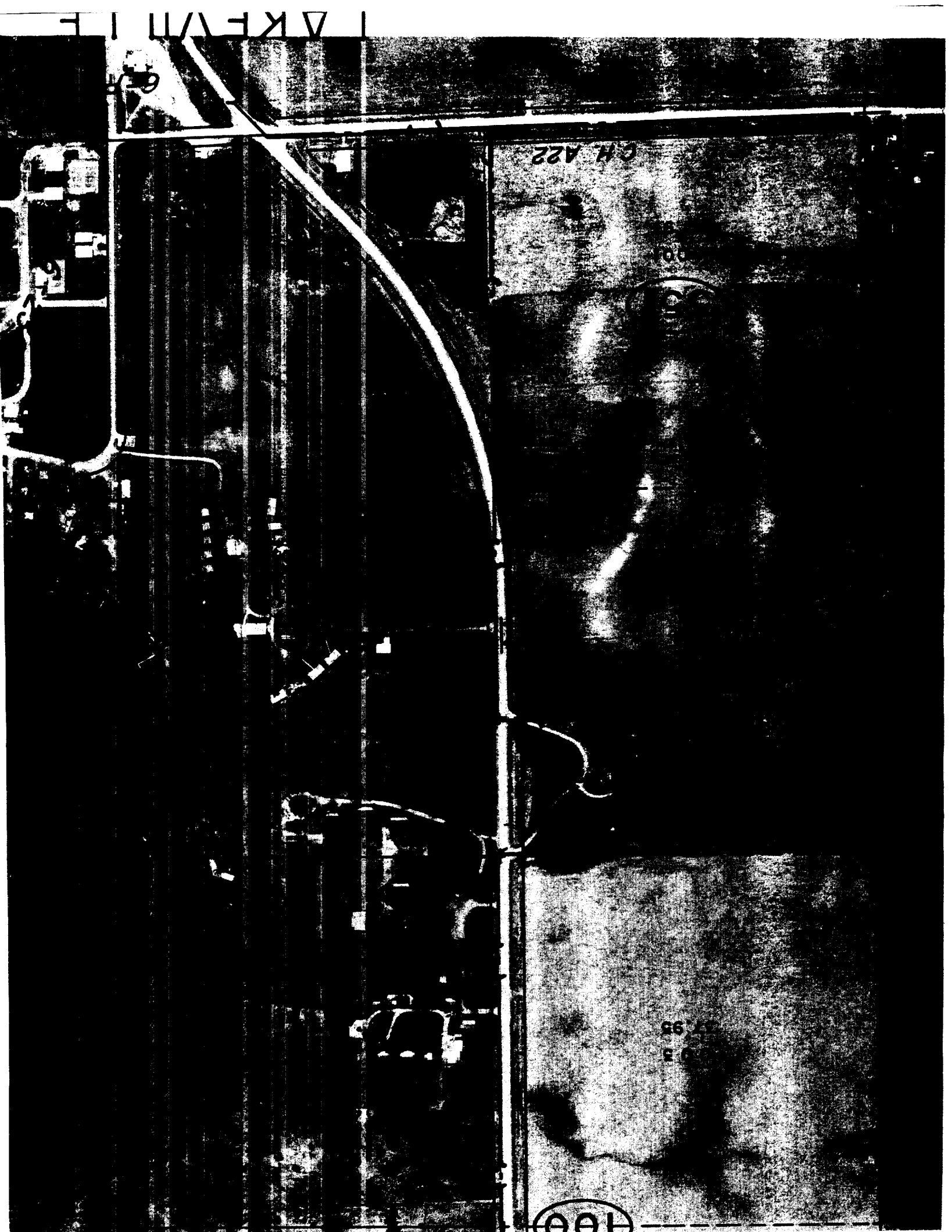
L. Robert du Treil  
John A. Lundin  
Ronald D. Rackley  
L. Robert du Treil, Jr.  
W. Jeffrey Reynolds

Steven J. Crowley  
Ann Gallagher  
Donald P. Ledford

James D. Sadler  
Thomas E. Sadler  
J.W. Stelger

Consultants To The Firm:  
Marvin Blumberg  
Howard T. Head  
Harold L. Keweenaw  
Ogden L. Presbrey

EXHIBIT 8



C.H. A22

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EXHIBIT 9



## **DOCUMENTS TO BE PRODUCED**

a. All documents which describe or were created or reviewed in the preparation or development of Mayer's proposed budget for operating the facility.

b. All documents which identify or describe costs of constructing the facility.

c. All documents which identify or describe costs of operating the facility for the first three months.

d. All documents which describe all or any part of Mayer's proposed staffing of the facility.

e. All documents which describe all or any part of Mayer's proposed program service.

f. All documents constituting or describing contacts with equipment suppliers.

g. All documents identifying or describing the proposed site or its suitability.

h. All documents constituting or describing the arrangements to purchase or lease the site specified.

i. All documents depicting the proposed location of the tower and guy wires on the proposed site.

j. All documents identifying or describing the type of tower proposed.

k. All documents identifying or describing other sites Mayer considered specifying in her application.

CERTIFICATE OF SERVICE

I, Patricia A. Druliner, a secretary with the law firm of Roberts & Eckard, P.C., hereby certify that I have sent a copy of the foregoing MOTION TO ENLARGE THE ISSUES by first class U.S. mail, postage prepaid, on this 1st day of March, 1993, to the following:

\*Honorable Edward Luton  
Administrative Law Judge  
Federal Communications Commission  
2000 L Street, Second Floor  
Stop Code 0900  
Washington, DC 20554

\*Paulette Laden, Esq.  
Hearing Branch, Enforcement Division  
Mass Media Bureau  
Federal Communications Commission  
2025 M Street, N.W., Room 7212  
Washington, DC 20554

Richard F. Swift, Esq.  
Tierney & Swift  
Suite 210  
1200 18th Street, N.W.  
Washington, DC 20036  
Counsel for Sharon A. Mayer

  
Patricia A. Druliner

\* By Hand Delivery